

California Regional Water Quality Control Board  
North Coast Region

CLEANUP AND ABATEMENT ORDER NO. R1-2002-0115

for

PACIFIC GAS AND ELECTRIC COMPANY

MADELINE L. MUSCO

GEORGE LAWRY

RICHARD COLOMBINI

KENNETH COKER

JOEL DeSILVA

137 GROUP PARTNERSHIP and  
UPWAY PROPERTIES

for

FIRST AND B STREETS  
SANTA ROSA

Sonoma County

The California Regional Water Quality Control Board, North Coast Region, (hereinafter Regional Water Board), finds that:

1. In 1876, the Santa Rosa Gas Light Company erected a coal gas manufacturing plant at First and B Streets in Santa Rosa, California (hereinafter Site). The plant was converted to an oil gas manufacturing plant around the turn of the century. Pacific Gas & Electric Company (PG&E) operated the gas manufacturing plant until 1924. A Site location map is included as Attachment A.
2. In 1985, PG&E began historical research and title searches to identify former gas plant sites in its service area. Environmental assessments were then conducted to evaluate environmental conditions, determine human health risks and identify appropriate management measures to mitigate potential exposure. The results of the environmental assessment work at the Site, conducted in July 1986, revealed the presence of polynuclear aromatic hydrocarbons (PAHs) and lead in shallow soils. In October 1986 additional samples were collected in a former coal tar pit where significantly higher concentrations of PAHs and lead were previously found.
3. On July 31, 1987, the Regional Water Board issued Cleanup and Abatement Order (CAO) No. 87-112 to PG&E with directives to submit a plan to determine the extent of contamination, provide regular updates, and submit a plan to cleanup and abate the effects of the contamination.
4. In August 1987, the 137 Santa Rosa Group Partnership (Partnership), a party that had previously entered into an agreement to purchase the Site, drilled soil borings and found PAHs, and diesel and oil range hydrocarbons in soils to approximately 15 feet below ground surface (bgs).
5. In November 1987, the Partnership finalized the purchase of the Site [Assessor's Parcel Number (APN) 10-068-17 and 10-068-20] (Attachment B), and agreed to assume the liability and responsibility for the hazardous materials onsite and indemnified PG&E. The Partnership currently includes Madeline Musco, George Lawry, Richard Colombini, Kenneth Coker and Joel DeSilva.

6. In December 1987, impacted soil and coal tar was removed from the coal tar pit area and three groundwater-monitoring wells (MW-1, MW-2 and MW-3) were installed.
7. On January 13, 1988, CAO 87-112 was amended by CAO No. 88-11 to recognize the change in property ownership. CAO No. 88-11 contained language modifying all references to the PG&E Company to also include H. A. Musco and the 137 Santa Rosa Group Partnership.
8. On April 18, 1988, Order No. 88-63 was issued amending Order No. 87-112 as amended by CAO No. 88-11. CAO No. 88-63 ordered the submittal of a plan to define the extent of groundwater contamination, the installation of additional groundwater monitoring wells, the design, installation and operation of a groundwater extraction and treatment system and submittal of a report evaluating system effectiveness.
9. In April 1988, the Partnership installed three additional groundwater-monitoring wells and drilled soil borings in the vicinity of MW-4 due to the elevated levels of diesel and motor oil range hydrocarbons found in that area. In July 1988, impacted soil was removed to the extent feasible. Excavation was reported to be limited by the location of subsurface PG&E utilities.
10. In September 1988, a coal tar vault was discovered in the northeast area of the site and removed. In addition, a previously unknown underground storage tank was discovered. In February 1989, the underground storage tank was closed in-place.
11. In 1995, the City of Santa Rosa collected soil samples along the banks of Santa Rosa Creek immediately adjacent to the Site, and detected levels of PAHs at concentrations of concern in the soil adjacent to the creek.
12. Groundwater monitoring and sampling revealed the presence of separate phase hydrocarbons (product) in monitoring wells 3 and 4, characterized as Bunker C oil. Separate phase hydrocarbons and impacted soil remain in place in the vicinity of the underground storage tank.
13. On December 19, 1996, CAO No. 96-102 was issued. The Order reflects changes in the 137 Santa Rosa Group Partnership membership including the resignation of John H. Downey as the Group's managing partner and the death of H. A. Musco. The amended Order required the dischargers to complete the following work:
  - Evaluate the extent of petroleum hydrocarbon and PAH contamination, both on site and where contamination has migrated, and develop an appropriate remedial action plan. A work plan was due by January 31, 1997, to complete definition of the extent of petroleum hydrocarbon contamination and include a schedule for the submittal of a corrective action plan to address petroleum releases. A report of the investigation was due by May 15, 1997.
  - Characterize and evaluate the PAH contamination attributable to the site that has migrated into the right-of-way and underneath Santa Rosa Creek, and submit a work plan by January 31, 1997, to the Executive Officer for concurrence, to complete definition of the extent of PAH contamination.
  - Submit a remedial action plan by March 31, 1997, to address the PAH contamination attributable to the site found in and near Santa Rosa Creek.
  - Submit brief monthly progress reports by the fifteenth day of the month describing activities completed during the prior month.

14. In 1996, sediment and water samples were collected in the bottom of Santa Rosa Creek below the base of the north bank adjacent to the Site. The results are reported in the November 12, 1996, *Phase II Environmental Sampling and Preliminary Phase I Analytical Data Summary Report for the Prince Memorial Greenway Project for the Santa Rosa Creek Channel*, prepared by Kleinfelder, Inc. The results revealed the presence of petroleum hydrocarbons and PAHs in sediment and water.
15. In April 1997, soil borings were drilled in the southern portion of the property and significant concentrations of diesel, motor oil and oil and grease were detected in soil. Field observations documented in the boring logs include strong odors, stained soil, sheen, coal dust, and an oily substance at the soil/groundwater interface.
16. The record indicates that APN 10-068-17 was converted to APN 10-068-21 and APN 10-068-22. A specific date for this action is not included in the record. In May 1997, Upway Properties, LLC, purchased that portion of the Site identified as APN 010-068-021 and the Partnership retained APN 010-068-022 (Attachment C). The Partnership did not notify Regional Water Board staff regarding the change in Site ownership until January 17, 2002.
17. Based on information contained in the record assembled by the Regional Water Board, including evidence of past discharges at the Site, and current site ownership and control, PG&E, the 137 Santa Rosa Group Partnership, Madeline L. Musco, George Lawry, Richard Colombini, Kenneth Coker, Joel DeSilva and Upway Properties are collectively referred to as the Dischargers.
18. On June 27, 1997, Regional Water Board staff concurred with the June 5, 1997, work plan prepared by EnviroNet Consulting, to conduct additional investigation. On December 7, 1999, Regional Water Board staff, due to the lack of activity, requested work plan implementation. On February 13, 2001, PG&E and the Partnership were informed of their non-compliance status and the report of findings was requested by April 2, 2001. The report was not submitted by that date.
19. On April 12, 2001, a document identified as a Corrective Action Plan (CAP) was submitted. The plan contained a proposal to conduct work only on APN 010-068-022 and coordinate the work with the City of Santa Rosa Prince Memorial Greenway Project. The plan did not contain provisions for onsite soil and groundwater cleanup. On October 16, 2001, Regional Water Board staff notified PG&E and the Partnership that the CAP was not acceptable because it did not meet the requirements of the California Code of Regulations Title 23, Division 3, Chapter 16, Article 11, Section 2725. PG&E and the Partnership were also informed that Cleanup and Abatement Order No. 96-102 would be revised.
20. On February 19, 2002, the *Work Plan for Additional Subsurface Investigation* was submitted and included a revised scope of work to define the extent of contamination including the drilling of additional soil borings along the creek bank. The proposal was later revised to include the collection of samples coordinated with the removal of the north bank concrete wall of Santa Rosa Creek during the construction of the Prince Memorial Greenway Project pedestrian/bicycle path.
21. The removal of the north concrete wall revealed the presence of lamp black, a by-product of the gas manufacturing process, extending east near the Santa Rosa Avenue Bridge and west beyond the current property line. The City of Santa Rosa removed a significant portion of the north bank and collected samples to determine offsite disposal alternatives. The analytical results revealed the presence of diesel and motor oil range hydrocarbons, PAH's and elevated levels of lead. City of Santa Rosa staff also reported an encounter with separate phase oil on groundwater at the base of the creek during the drilling of retaining wall footings.

22. The analytical results of samples collected on behalf of the Partnership from the exposed north bank of Santa Rosa Creek were consistent with the City of Santa Rosa's findings. The results in parts per million (ppm) included total petroleum hydrocarbons as diesel at up to 5,800, motor oil at up to 9,100, total oil & grease at up to 2,400 and lead at up to 2,100. Lead concentrations in some of the samples exceeded the Total Threshold Limit Concentration of 1,000 ppm for hazardous waste characterization. PAHs were also detected.
23. On September 30, 2002, City of Santa Rosa representatives removed portions of the concrete creek floor and conducted soil and water sampling west of Santa Rosa Avenue to evaluate future Prince Memorial Greenway Project design features. Petroleum hydrocarbon and polynuclear aromatic odors were noted in the water beneath the concrete creek floor adjacent to the Site. Regional Water Board staff collected water samples. The analytical results showed the presence of PAHs including Naphthalene at up to 380 parts per billion.
24. Historical maps show the presence of the lamp black separators immediately adjacent to Santa Rosa Creek. The maps also show additional underground storage tanks used for oil storage adjacent to Santa Rosa Creek. The removal of these tanks and piping is not documented in the record. Therefore, additional sources of contamination may remain in place.
25. The Dischargers have caused or permitted, cause or permit, or threaten to cause or permit waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance. Continuing discharges are in violation of the Porter-Cologne Water Quality Control Act and provisions of the Water Quality Control Plan for the North Coast Region (Basin Plan).
26. Beneficial uses of areal groundwater include domestic, irrigation, and industrial supply. Beneficial uses of Santa Rosa Creek, a tributary to the Laguna de Santa Rosa and the Russian River are:
  - a. municipal and domestic supply
  - b. agricultural supply
  - c. industrial process supply
  - d. groundwater recharge
  - e. navigation
  - f. hydropower generation
  - g. water contact recreation
  - h. non-contact water recreation
  - i. commercial and sport fishing
  - j. warm freshwater habitat
  - k. cold freshwater habitat
  - l. wildlife habitat
  - m. migration of aquatic organisms
  - n. spawning, reproduction, and/or early development.
27. The California Water Code, and regulations and policies developed thereunder, require cleanup and abatement of discharges and threatened discharges of waste to the extent feasible. Cleanup and abatement activities are to provide attainment of background levels of water quality, or the highest water quality that is reasonable if background levels of water quality cannot be restored. Alternative cleanup levels greater than background concentration shall be permitted only if the discharger demonstrates that: it is not feasible to attain background levels; the alternative cleanup levels are consistent with the maximum benefit to the people of the State; alternative cleanup levels will not unreasonably affect present and

anticipated beneficial uses of such water; and they will not result in water quality less than prescribed in the Basin Plan and Policies adopted by the State and Regional Water Board.

28. Water quality objectives in the Basin Plan are adopted to ensure protection of the beneficial uses of water. The most stringent water quality objectives for protection of all beneficial uses are selected as the protective water quality criteria. Alternative cleanup and abatement actions must evaluate the feasibility of, at a minimum: (1) cleanup to background levels, (2) cleanup to levels attainable through application of best practicable technology, and (3) cleanup to protective water quality criteria levels. Exhibit 1, attached to and made part of this Order sets out the water quality objectives for ground and surface water.
29. Discharge prohibitions contained in the Basin Plan apply to this site. State Water Resources Control Board Resolution 68-16 applies to this site. State Water Resources Control Board Resolution 92-49 applies to this site and sets out the *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Section 13304 of the California Water Code*.
30. The Water Quality Control Plan for the North Coast Region (Basin Plan) Resolution 93-59 applies to this site, which states "With respect to all underground storage cases in this Region, the Regional Water Board's highest priority will be to eliminate pollutant sources through tank removal, free product removal, and removal of contaminated soil to the extent practicable."
31. Reasonable costs incurred by Regional Water Board staff in overseeing cleanup or abatement activities are reimbursable under Section 13304 of the California Water Code.
32. The Regional Water Board will ensure adequate public participation at key steps in the remedial action process, and shall ensure that concurrence with a remedy for cleanup and abatement of the discharges at the site shall comply with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) ("CEQA").
33. The issuance of this Cleanup and Abatement Order is an enforcement action being taken for the protection of the environment and, therefore, is exempt from the provisions of CEQA in accordance with Sections 15308 and 15321, Chapter 3, Title 14 of the California Code of Regulations.
34. Any person affected by this action of the Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Water Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request. In addition to filing a petition with the State Water Board, any person affected by this Order may request the Regional Water Board to reconsider this Order. To be timely, such request must be made within 30 days of the date of this Order. Note that even if reconsideration by the Regional Water Board is sought, filing a petition with the State Water Board within the 30-day period is necessary to preserve the petitioner's legal rights. If the Dischargers choose to appeal the Order, the Dischargers are advised that they must comply with the Order while the appeal is being considered.

THEREFORE, IT IS HEREBY ORDERED that, CAO Order No. 96-102 is hereby rescinded and pursuant to California Water Code Sections 13267(b) and 13304, the Dischargers shall cleanup and abate the discharge and threatened discharges forthwith and shall comply with the following provisions of this Order:

- A. Conduct all investigative work under the direction of a California professional civil engineer or registered geologist experienced in soil and groundwater assessment and remediation.
- B. Conduct all engineering work including treatment system design and installation under the direction of a California professional civil engineer.
- C. Pay all reasonable costs incurred by the Regional Water Board in supervising cleanup and abatement activities by the due date specified in invoices.

Extent of Contamination

- D. Complete the entire scope of work identified in the revised February 19, 2002 work plan, October 2, 2002 work plan addendum, November 26, 2002 revised drilling locations and any additional addendums within 45 days of issuance of this Order. The work must define the extent of petroleum hydrocarbon and PAH contamination.
- E. Submit a report of findings for the work identified in Task D within 30 days of work plan completion. The report must include the north creek bank sampling work that was coordinated with the City of Santa Rosa during the Prince Memorial Greenway Project. The report must also include an adequate work plan for any additional effort necessary to define the extent of contamination including the extent of petroleum hydrocarbon and PAH contamination in water beneath the concrete floor of Santa Rosa Creek.
- F. Continue with Tasks D and E until the Regional Water Board Executive Officer has determined that the horizontal and vertical extent of soil and groundwater contamination has been defined.

Source Identification

- G. Submit a plan within 30 days of issuance of this Order to investigate the presence, or absence, of any remaining subsurface sources of contamination including underground storage tanks, piping and/or buried waste.
- H. Implement the plan identified in Task G within 30 days of the Regional Water Board Executive Officer's concurrence with the plan.
- I. Submit a report of findings within 30 days of work plan implementation. The report must identify all sources, including currently known sources such as impacted soil, separate phase petroleum hydrocarbons in soil and on groundwater and gas manufacturing process waste products including lamp black and any newly discovered sources.

Site Remediation and Source Removal

- J. Submit a Corrective Action Plan (CAP) according to the requirements of Title 23, Division 3, Chapter 16, Article 11, Section 2725 within 45 days of Regional Water Board Executive Officer's determination that Tasks D-I have been completed. The Corrective Action Plan must include a feasibility study that evaluates the length of time

until project completion for the various technically feasible alternatives and their associated costs including ongoing groundwater monitoring, sampling and reporting costs.

The Corrective Action Plan must include a method of source removal including any previously unknown underground storage tanks, subsurface piping, impacted soil including impacted soil around and beneath the existing underground storage tank, separate phase petroleum hydrocarbons in soil and on groundwater and gas manufacturing waste including lamp black. The CAP must also identify a permanent method to abate the discharge of petroleum hydrocarbons and PAHs into and beneath Santa Rosa Creek.

- K. Complete any additional work deemed reasonably necessary by the Regional Water Board Executive Officer to abate and cleanup the discharge of waste.
- L. If, for any reason, the Dischargers are unable to perform any activity or submit any documentation in compliance with the work schedule contained in this Order or submitted pursuant to this Order and approved by the Executive Officer, the Dischargers may request in writing, an extension of time as specified. The extension request must be submitted 5 days in advance of the due date and shall include justification for this delay including the good faith effort performed to achieve compliance with the due date. The extension request shall also include a proposed time schedule with new performance dates for the due date in question and all subsequent dates dependent on the extension. A written extension may be granted for good cause, in which case the Order will be revised accordingly.

Ordered by \_\_\_\_\_

Susan A. Warner  
Executive Officer

December, 18, 2002